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Return to work after brain injury: How do we get there?

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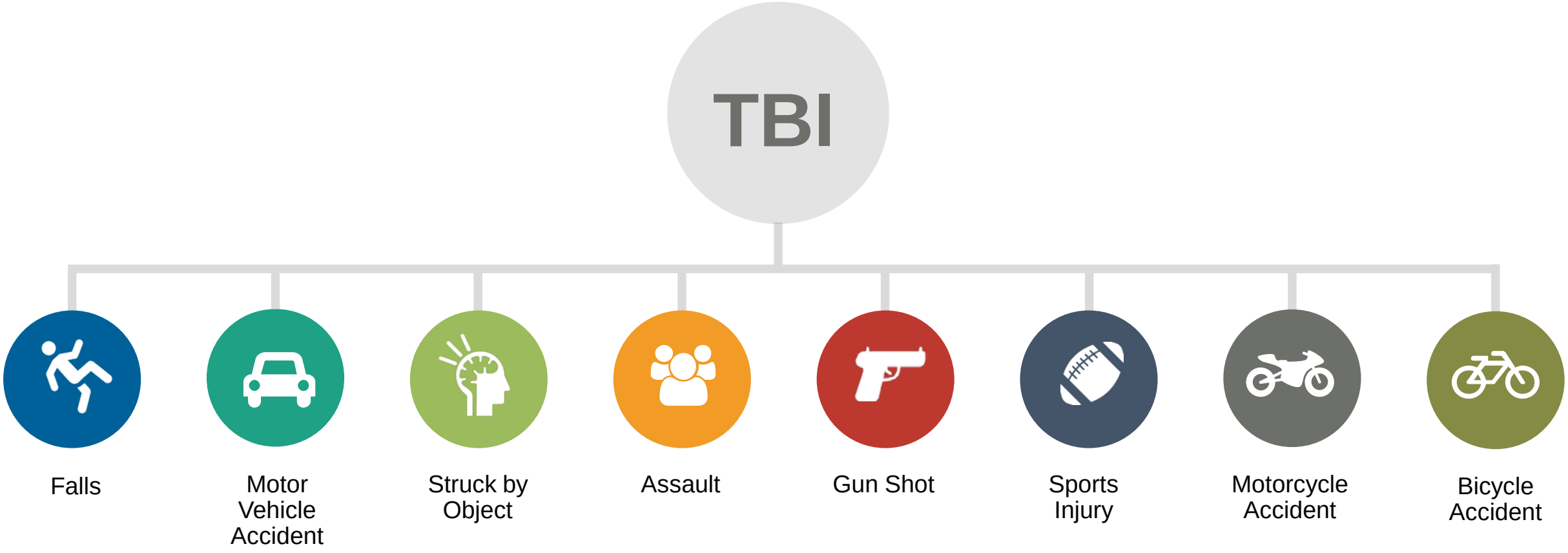
Objectives

- Highlight current outcome and return to work statistics for acquired brain injury (ABI)
- Discuss how post-acute rehabilitation may be tailored to support returning to work
- Discuss what return to work looks like for ABI patients
- Identify successful strategies for transitioning back to the workplace

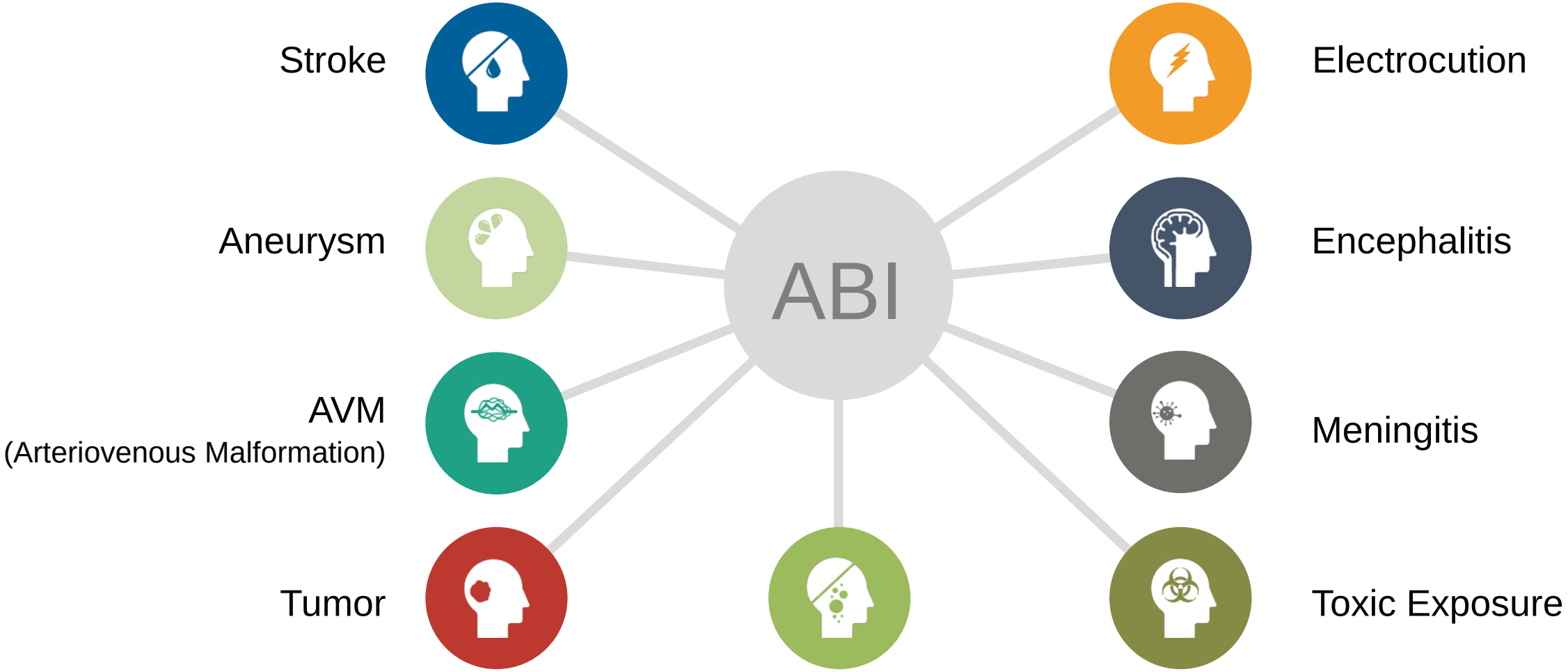
There is a TBI every 13 seconds in the United States

285 traumatic brain injuries in this hour

Causes of Traumatic Brain Injury



Causes of Acquired Brain Injury



Traumatic Brain Injury Risk Factors

Definition of mTBI

Mild	Moderate	Severe
Normal structural imaging	Normal or abnormal structural imaging	Normal or abnormal structural imaging
LOC = 0-30 min	LOC > 30 min and < 24 hr	LOC > 24 hr
AOC = from a moment up to 24 hr	AOC > 24 hr severity based on other criteria	
PTA = 0-1 day	PTA > 1 and < 7 days	PTA > 7 days
GCS = 13-15	GCS = 9-12	GCS = 3-8

Hot Topics: Coronavirus (COVID-19)

Virus infection associated with neurological conditions/ symptoms including:

- Ischemic stroke
- Intracerebral hemorrhage
- Psychosis
- Seizure
- Cardiac arrest and respiratory failure à anoxic injuries

Behavioral symptoms

- Behavioral excess
- Non-compliance
- Impaired social skills
- Lack of initiation

Let’s break it down:

What does the data show?

Brain injury remains a substantial problem in the U.S.

ABI is a major cause of death and disability in the U.S.

Centers for Disease Control and Prevention, 2019

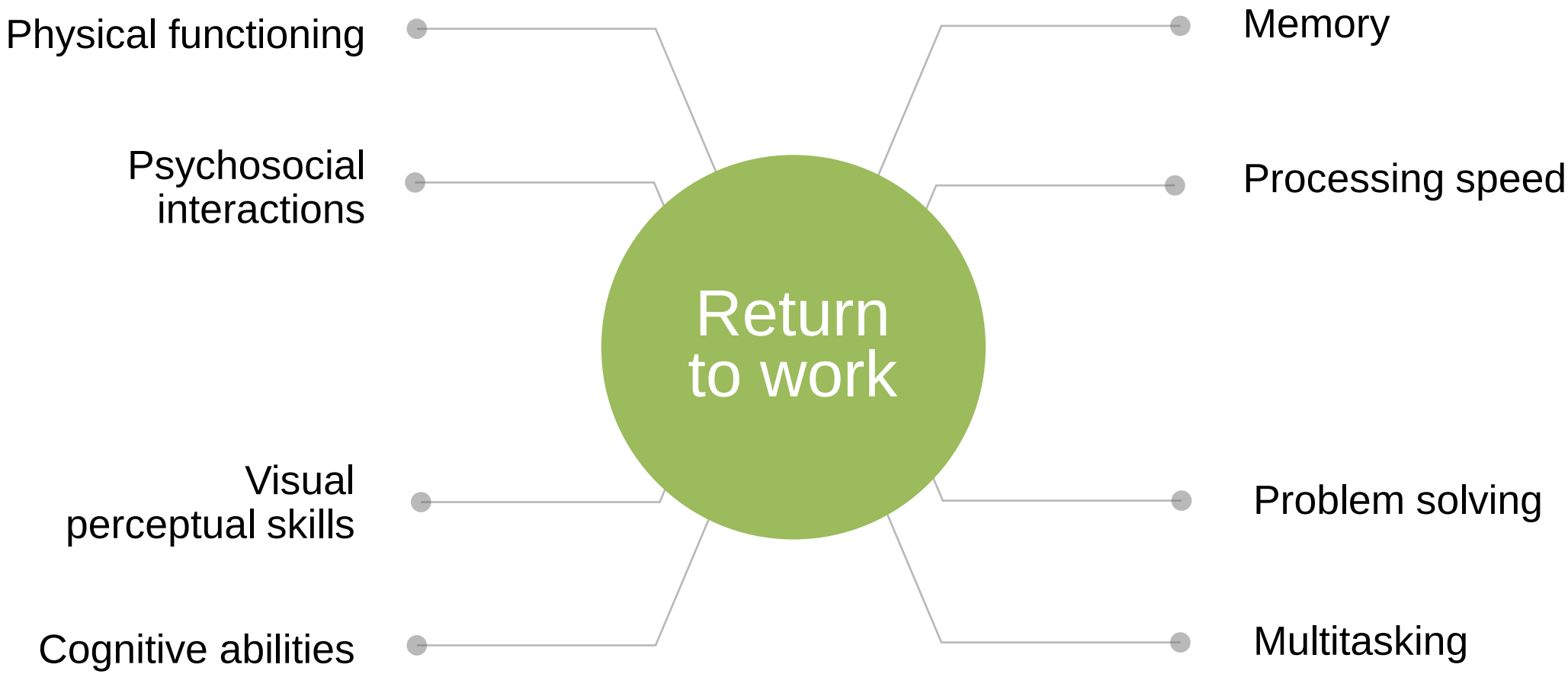
Morbidity and mortality rates for traumatic brain injury (TBI) have increased over the years

- CDC estimates emergency department visits, hospitalizations, and deaths in the U.S. have increased over 50% (2006-2014)

Approximately 2% of the U.S. population ***(6.5 million people)*** live with disabilities secondary to brain injuries

- Memory, movement, sensation, and emotional functioning

Factors influencing return to work



Cognitive skills are considered the most affected after brain injury

Why focus on return to work?

Achieving highest possible level of function and quality of life (QOL) is a primary goal for the majority of ABI survivors

Return to work (RTW) is considered a critical aspect of QOL

- Reduces stress of financial burdens
- Provides focus
- Allows a person to feel productive
- Gives structure to the day, etc.

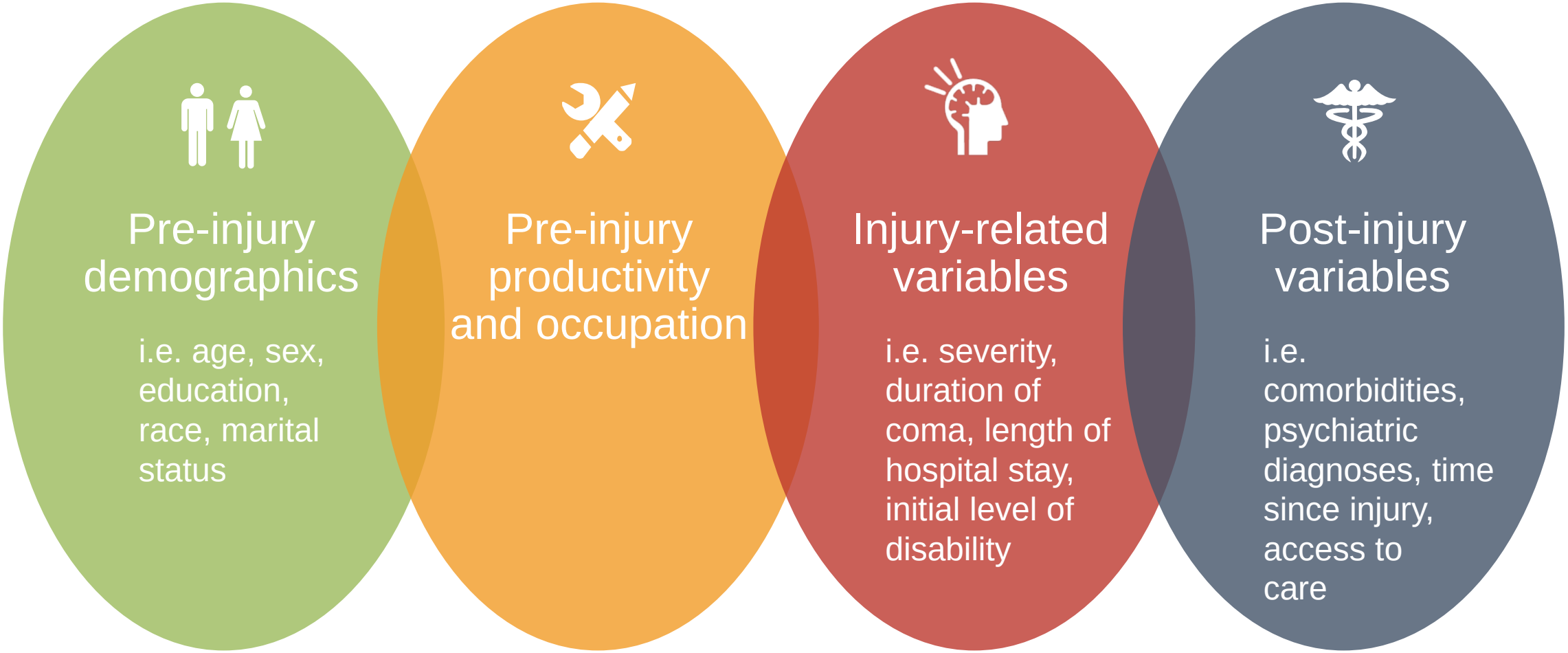
Why focus on return to work?

The overall cost of brain injury is high

- Hospitalization and rehab
- Lost wages
- Decreased productivity
- Dependence on government and other assistance

RTW ultimately reduces employer costs related to decreases in productivity secondary to unfilled positions and hiring/ training/re-training staff

Predictors of RTW

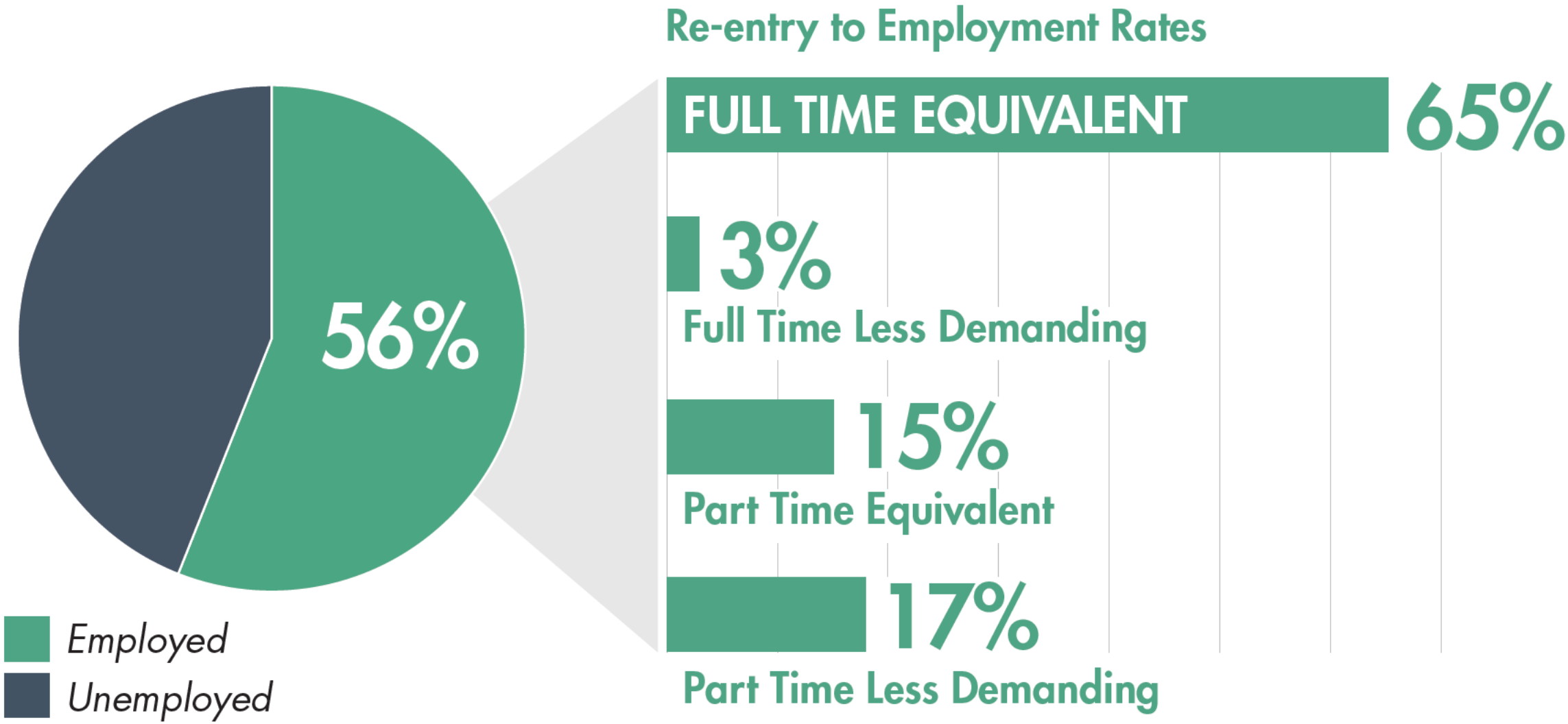


Re-entry to Employment Rates

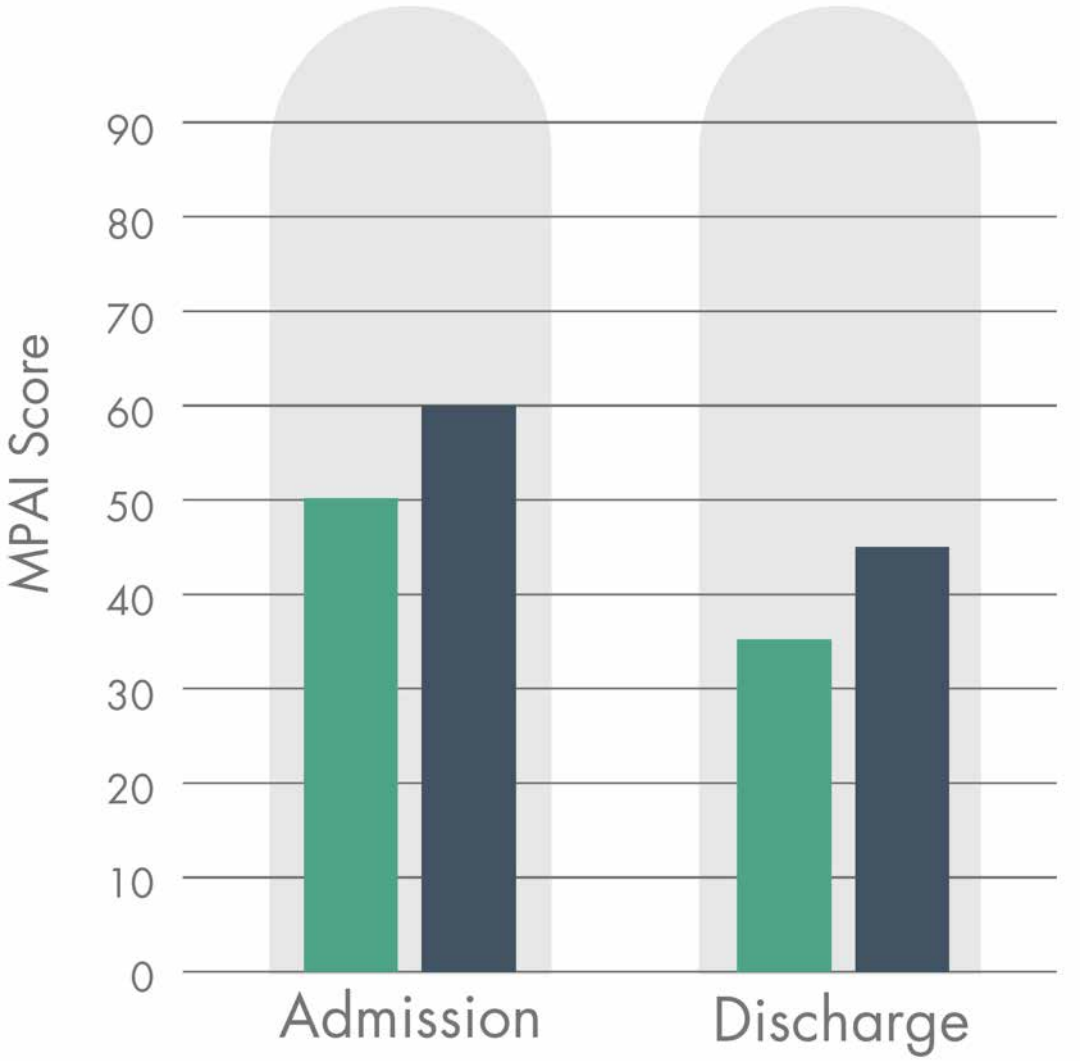
- Predictors
- Variation in statistics
  - Injury severity
  - Injury chronicity
  - Age of the survivor
  - Definition of “successful” RTW

Ranges from ~40-80% 1-year post-TBI; ~40-60% 1-year post-stroke

RTW in a primarily severe population

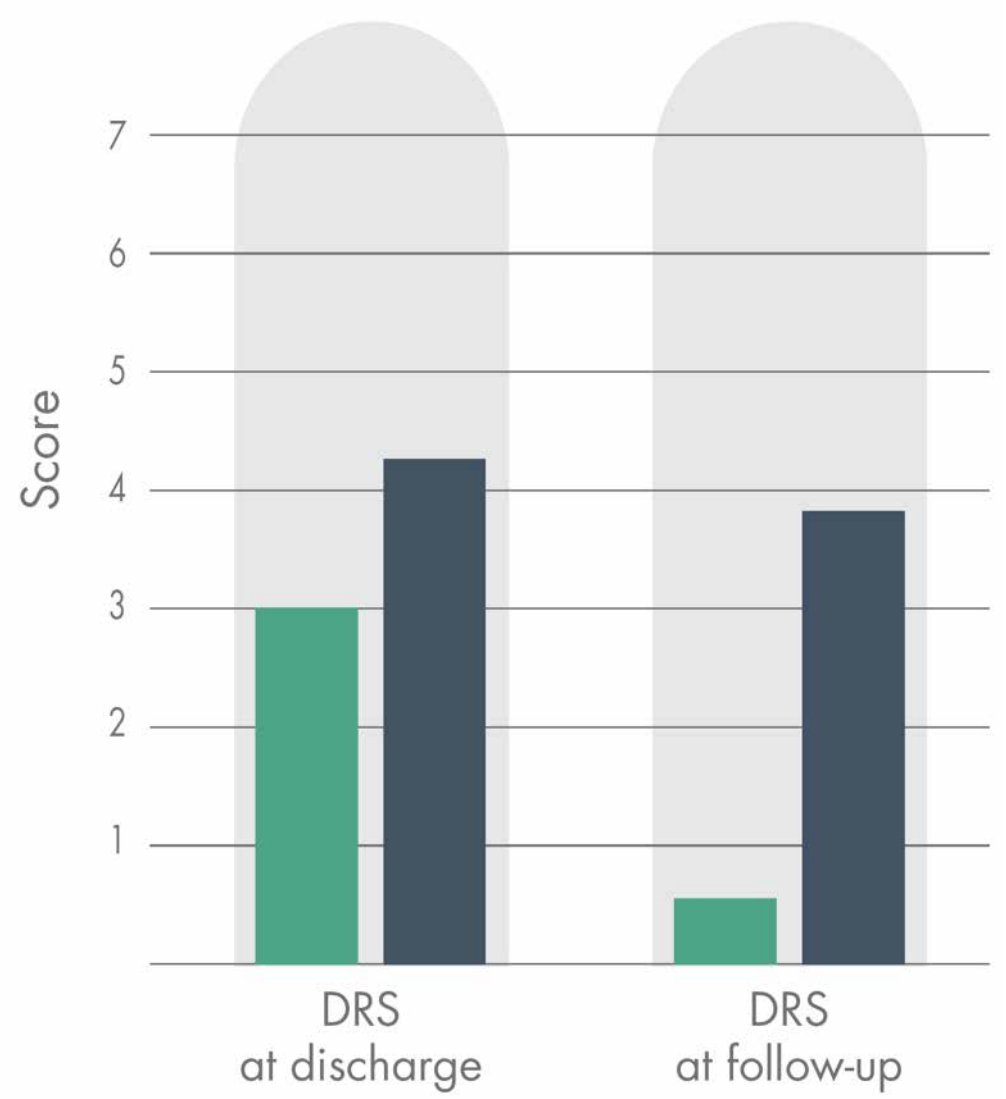


Investment in rehabilitation is critical in workplace re-entry



Participants with better rehabilitative outcomes were more likely to return to work.

The power of employment



Participants who returned to work continue to improve over time, while those who were unemployed at follow-up remain stable, with higher levels of disability.

Employed
Unemployed

Rehab and Return to Work

The complexity of brain injury

- Brain injuries are complex, no injury is exactly alike
- Multiple areas may be damaged
- Tailoring therapies offers a unique approach to each patient, allowing for maximum possible rehabilitative outcome

Post acute rehab

Post-acute care offers a level of rehabilitation outside of the immediate needs of the patient

Inadequate therapy?

Unsuccessful attempts at RTW

- Early and repeated job failures can be detrimental for TBI survivors
- Lower subjective QoL

Persistent Symptoms - Cognition

- Decreased ability to initiate and complete tasks
- Poor organizational skills
- Slowed speed of information processing
- Poor problem solving skills
- Word finding problems or new onset stuttering
- Inability to keep up previous pace significantly adds to stress
- Executive function

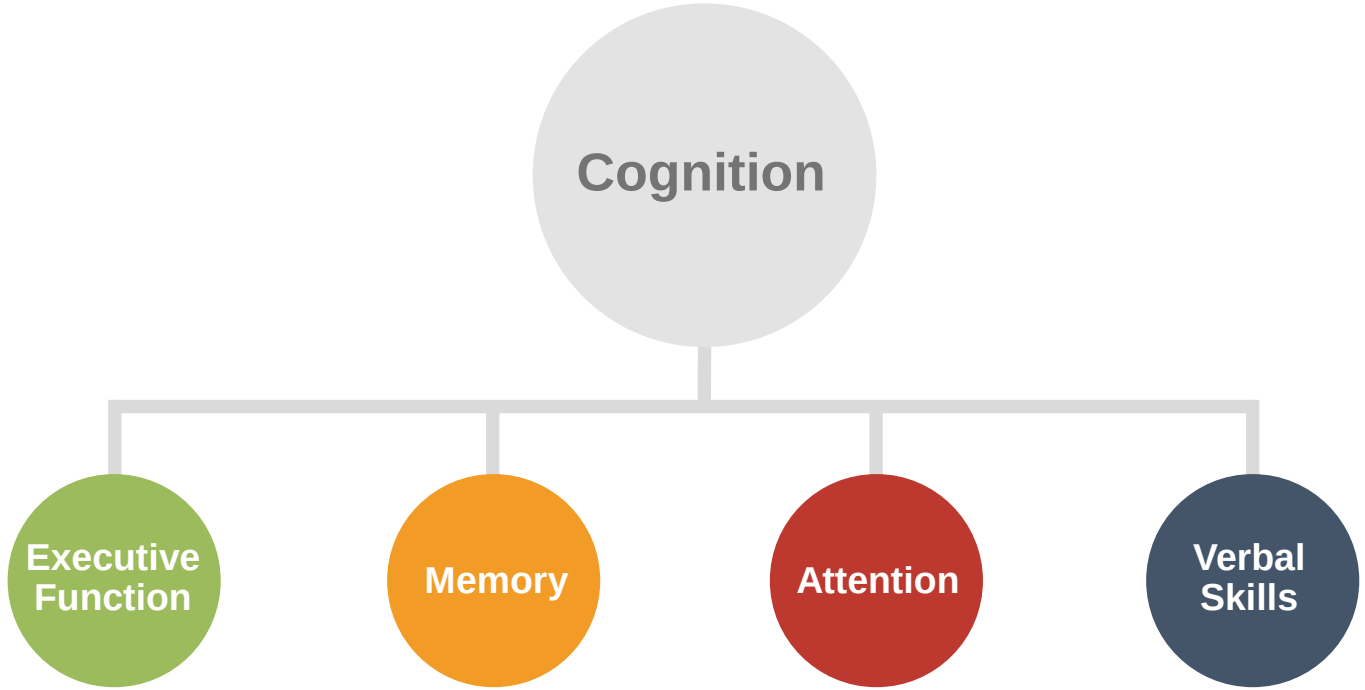
Major Disciplines affecting outcome

Disciplines working together for a common goal

- Cognitive Rehabilitation (speech therapy)
- Occupational Therapy
- Education Therapy
- Counseling
- Physical Therapy

- Well-balanced and coordinated treatment plans
  - Assess difficulties and plan accordingly
- Re-assess progress across time and (re)direct therapy goals
- Honing of job-related skills

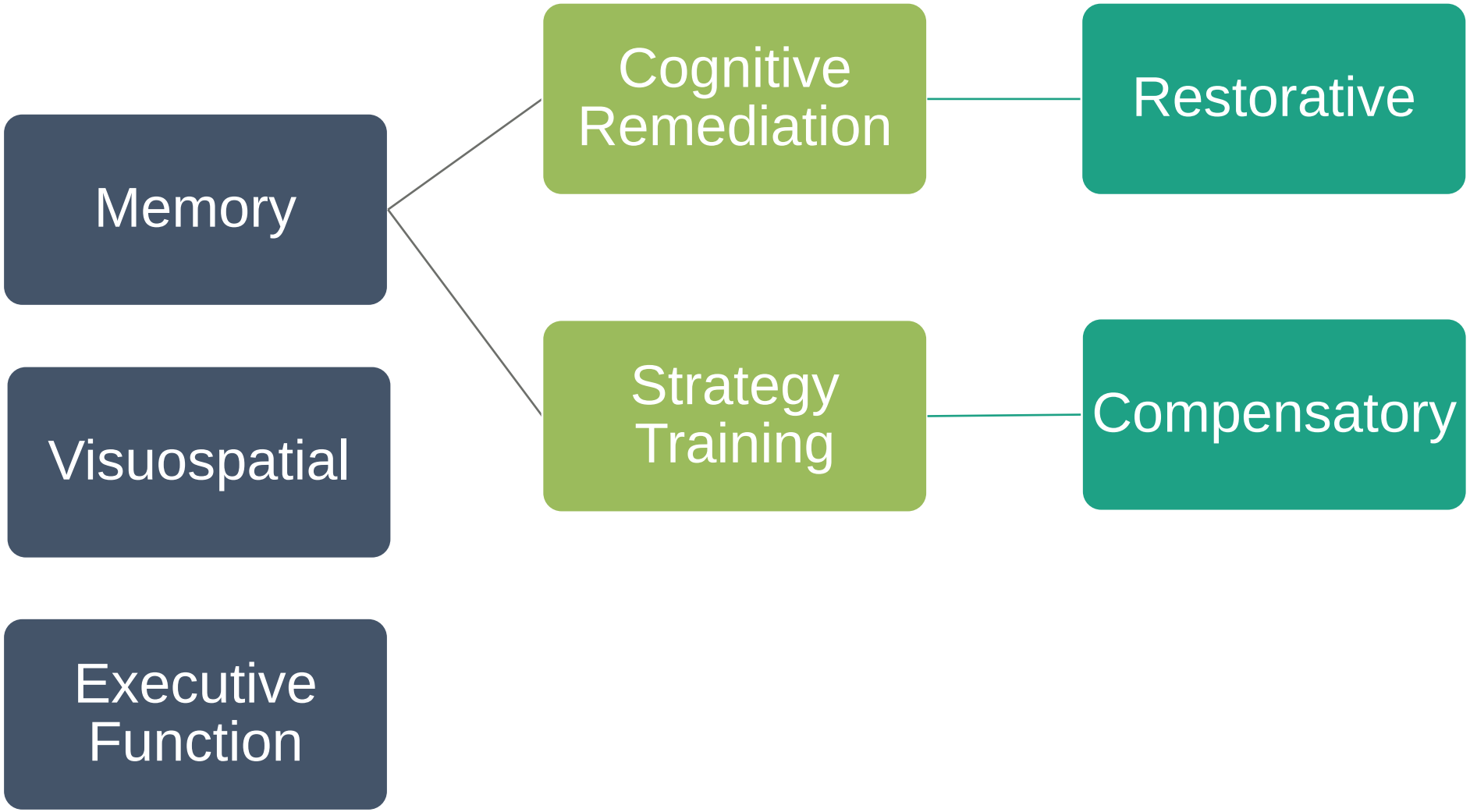
Cognitive / Speech Rehabilitation



Cited as strong post-injury RTW predictors

Critical to workplace re-entry

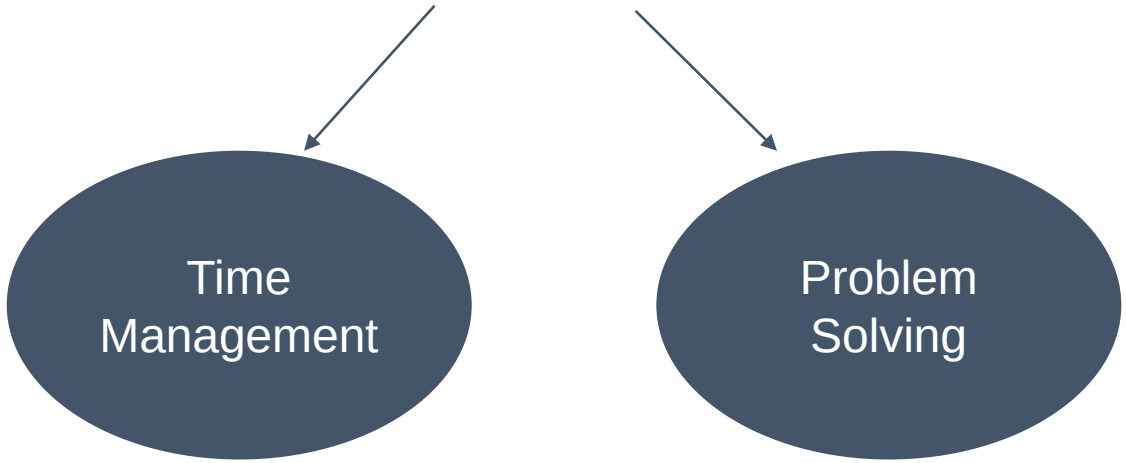
Cognitive / Speech Rehabilitation



Cognitive Rehab/Speech Therapy: Put it in Context

Independent Days

- Designed to allow the patient autonomy to complete a number of tasks within their allotted “work” (i.e. therapy) day



Occupational Therapy

Occupational therapists can assess and treat cognitive deficits that interfere with daily functioning

- Context-based approaches

Occupational Therapy

Job specific training

- Simulation of real-world situations
- Target skills needed
- Measure work related skills
  - VALPAR Component Work Samples
    - Clerical Comprehension and Aptitude
    - Soldering and Inspection
    - Electrical Circuitry and Print Reading
    - Drafting

Prevocational modules

- Provides both subjective and objective measures of progress to employers

Worksite Evaluations

Occupational Therapy: Put it in Context

- Patient DM pre-injury employment: **Rigging Technician**
  - Responsible for electrical work/staging/programming for event venues
  - Context-based approach: Re-learned how to safely use power tools during OT sessions
    - built a step that was needed for the driving simulator

Education

Reading comprehension

Work on understanding shorthand memos and emails

Fluency/speed of processing

Works on efficiency and completing simple / daily tasks

Broad spectrum math

Budget expenses and understand unit costs

Visual / Auditory tasks

Visual scanning: understanding spreadsheets/charts

Works on effective communication skills

Counseling

- Studies have shown a strong correlation between cognitive interventions and RTW post BI
  - Improves neurobehavioral symptoms
  - Establishes compensatory strategies
- Cognitive Interventions: broad term for a variety of approaches to address psychosocial problems at a conscious level
  - i.e. strategies for reducing anxiety/depression

Counseling

- Explore patient's work history and desires
- Facilitate patient interest and initiation
- Encourage volunteer opportunities as a steppingstone to RTW
- Assist with vocational rehabilitation applications
- Ensure on-site employment coaching
- Accompany OT on worksite visits; discuss reasonable accommodations
- Assist with program planning (integration of employment tasks)
- Collaborate with team and employer for RTW integration schedule
- Meet with patient to process RTW successes and stressors

Physical Therapy

- Endurance training
- Full body strength training
- Ergonomics

Ensures safe physical RTW

The ultimate goal: Successful return to work

What does return to work look like?

Data suggests a ***majority will return to work if given access to appropriate levels of care***

Successful strategies

- Ensuring access to vocational rehab early in the continuum; may be implemented by OT's
- May require assistive technology; work with therapists to provide reasonable accommodations
- Phased approaches to RTW have been successful
- Creating a supportive environment; Communication is key

Questions?

(hopefully, some answers)

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THANK YOU

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